

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/2326

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : C07H 21/02

US CL : 530/419

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 530/419; 536/27, 28, 29, 25.4, 25.41; 935/20

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	Cook et al. "Use of Whole Blood Specimens for Routine Clinical Quantitation of Hepatitis C Virus RNA Does Not Increase Assay Sensitivity." Journal of Clinical Microbiology. December 2000, Vol 38. No. 12. Pages 4326-4331, Esp. Page 4327, Paragraphs 5,6,7.	1-3, 7-23
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Y		4-6
Y	Nuyts et al. "Efficient isolation of total RNA from Clostridium without DNA contamination." Journal of Microbiological Methods. 2001, 44, Pages 235-238, Esp Page 236, Column 1, Paragraphs 3,4; Column 2, Paragraphs 1,2.	4-6
X	Salte de Paula et al. "Comparison of Four Extraction Methods to Detect Hepatitis A Virus RNA in Serum and Stool Samples." The Brazilian Journal of Infectious Diseases. April 2003, Vol 7. No. 2, Pages 135-141, Esp Page 136, Paragraphs 4,5.	1,3,6,7,19-16
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Y		2,5,8-12,17-23
X	US 5,346,994 (Chomczynski) 13 September 1994 (13.09.1994)	1,3,6,7,13-16
---	Entire document. Esp Column 4, Lines 47-68; Column 5, Example 2.	-----
Y		2,5,8-12,17-23
A	US 4,843,155 (Chomczynski) 27 June 1989 (27.06.1989)	1-23
	Entire Document.	



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:	
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E" earlier application or patent published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

01 July 2005 (01.07.2005)

Date of mailing of the international search report

04 NOV 2005

Name and mailing address of the ISA/US

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Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:
Please See Continuation Sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☒ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

☐
☐

The additional search fees were accompanied by the applicant's protest.

No protest accompanied the payment of additional search fees.

BOX III. OBSERVATIONS WHERE UNITY OF INVENTION IS LACKING

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fees must be paid.

I. Group I, claim(s) 1-14 and 16-23, drawn to a method of isolation RNA and kit thereof.

II. Group II, claim(s) 15, drawn to a composition.

The inventions listed as Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: They are unified only by the composition of Group II, which is well known in the art. For example, Chomczynski (U.S. 5,346,994) discloses a solvent solution comprising guanidinium thiocyanate, ammonium thiocyanate, a sodium acetate buffer, glycol, and phenol.

The composition of Group II cannot therefore be considered as a special technical feature, as lack of unity rules hold that a feature known to a person of ordinary skill in the art makes no advance over the prior art.

The expression "special technical feature" refers to those features that define a contribution which each of the claimed inventions, considered as a whole, makes over the prior art. Thus, a feature found in the prior art can not be considered to be a special technical feature.